

SUPPORT FOR THE REQUEST OF MRS. M. J. ROGERS FOR A RULING
ON THE INTERPRETATION OF *NAIADITES ANGULATUS* DAWSON,
1860

By John Weir (*The University, Glasgow*)

The issue has been confused by Wheelton Hind (1894, *Mon. Palaeontographical Soc.* : 75) who listed *Naiadites angulata* (*sic*) Dawson, 1860 as a synonym of *Cardinia angulata* de Ryckholt, 1852 (*Mélanges paléontologiques* ", *Mém. Acad. roy. Belg.* 24 : 104, pl. 6,* figs. 10, 11), a species not mentioned by Dawson and of which he was probably unaware. Search has been made for de Ryckholt's original material, but without success (Dr. A. Pastiels *in litt.* 24th Nov. 1961). The provenance cited by de Ryckholt ("schiste houiller des environs de Visé") is too vague to be helpful in any search for new material of *C. angulata* de R. Carboniferous rocks in an area of 10 km. around Visé (district of Liège, Belgium) range from Lower Carboniferous (Viséan) to the lower part of the Westphalian, sediments of the Lenisulcata Zone, according to Dr. Pastiels, occupying the greater part of the area. De Ryckholt's figures may well be idealisations of a polymorph species of this zone of the lower Westphalian, but are inadequate for identifying the species or its genus.

Hind based his interpretation of *Cardinia angulata* de R. on the specimens from Lancashire, England, which he figured in his Monograph on *Carbonicola* etc. (*op. cit.*, 1894 : pl. 11, figs. 3-5 ; Manchester Mus. No. 585, Brit. Mus. (Nat. Hist.) No. 46866). This interpretation was adopted by A. Wood in recording *Carbonicola cf. angulata* (de Ryckholt) "as figured by Hind" from the North Wales Coalfield (1937, *Quart. J. Geol. Soc. London* 93 : 6 and text-fig. 2c), and in 1929 W. B. Wright compared his *Carbonicola carissima* with *C. angulata* Hind, without citing de Ryckholt.

Pruvost, however, in 1919 and again in 1930 regarded *Cardinia angulata* as synonymous with *Pachyodon similis* Brown, 1843, expressing also on the latter occasion the opinion that *Naiadites angulata* Dawson, 1868 and *Carbonicola angulata* Hind, 1894 were likewise synonymous of *P. similis* (*Mém. Mus. roy. Sci. nat. Belg.* : 225, footnote, and 240). Chernyschev (1931, *Trans. Geol. Surv. U.S.S.R.* 72 : pl. 2, figs. 37-39) figured some small shells from the Donetz Basin as *Carbonicola angulata* de Ryckholt, 1850 (*sic*). These figures (from photographs) differ in some respects from de Ryckholt's drawings and the author quotes as synonymous *Carbonicola angulata* Hind, 1894, and *C. similis* Pruvost, 1913 and 1919. Thus Chernyschev's contribution is not helpful in elucidating the problem of *Cardinia angulata* de Ryckholt.

Finally, the compilative work of Renier, Stockmans, Demanet and Van Straelen (1938, "Flore et faune houillères de la Belgique") makes no mention of *Cardinia angulata* de Ryckholt. Obviously the name has been little used because of uncertainty, and diversity of opinion, regarding the identity of the species it was intended to designate. In the absence of types it could not be otherwise, as the original figures are equivocal. The name *Cardinia angulata* de Ryckholt, 1852, should therefore be suppressed.† *Naiadites angulatus* Dawson, 1860, on the other hand, was well figured by Wheelton Hind in another publication of 1894 (as cited by Mrs. Rogers) from a specimen supplied by Dawson himself, No. 3132 in the Redpath Museum, Montreal, the only one there labelled " *Carbonicola angulata* (Dawson)". This specimen forms the only possible basis for the interpretation of the nominal species *Naiadites angulatus* Dawson, 1860, and I therefore support Mrs. Rogers's request.

* On p. 104 de Ryckholt's heading erroneously cites pl. 4.

† *Carbonicola angulata* (de Ryckholt (?)) Hind, 1894, could then either be regarded as a synonym of *Naiadites angulatus* Dawson, 1860, or more cautiously, could be inscribed " *Carbonicola* " cf. *angulata* (Dawson, 1860), or *Carbonicola* cf. *declivis* Trueman and Weir.